H

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,921	03/30/2001	Myrle K. Wiekert	36968/254973	7689

36192 7590 12/03/2003

CANTOR COLBURN LLP
55 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

EXAMINER	
LELE, TANMAY S	
ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 12/03/2003 H

Please find below and/or attached an Office communication concerning this application or proceeding.

H

Office Action Summary	Application No.	Applicant(s)	
	09/821,921	WIEKERT ET AL.	
	Examiner	Art Unit	
	Tanmay S Lele	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Oath/Declaration

1. Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required.

Specification

2. The abstract of the disclosure is objected to because "RALLIB01: 596721 v1" appears at the bottom. Correction is required. See MPEP § 608.01(b).

3. The use of the trademark "ERICSSON" (for example page 6) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

5. The disclosure is objected to because of the following informalities: "at 43" in paragraph 0029 on page 11 was not understood. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (Ritter, US Patent No. 6,89,221) in view of Applicant's admitted prior art and Fujii et al. (Fujii, US Patent No. 5,551,060).

Regarding claim 1, Ritter teaches of an extra capacity radio base station for a wireless communication system (Figure 1), comprising: a first radio base station providing wireless communication to at least one sector of the wireless communication system (Figure 1), the first group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65); and a second radio base station coupled to the first radio base station (starting column 2, line 63 and ending column 3, line 6), the second radio base station also providing wireless communication to the at least one sector (Figure 1), the second radio base station coupled to a second group of radios the second group of radios also transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (starting column 2, line 63 and ending column 3, line 6 and column 2, lines 53 –60 and column 4, lines 48 –65), wherein the first radio base station coupled to the second radio base station creates the extra capacity radio base station (starting column 2, line 63 and ending column 3, line 6 and starting column 8, lines 2 –6) and radios available for voice and data communication to the at least one sector of the wireless communication system (column 4, lines 52 –64).

Ritter does not specifically teach of the first radio base station coupled to a first group of n radios, where n is an integer, [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (note the brackets were added for clarity in language and it is believed these limitations have been addressed in the above cited references).

Applicant's prior art further teaches of the first radio base station coupled to a first group of n radios, where n is an integer (page2, paragraph 0005).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter's coupled base station system, Applicant's submitted cell and radio configurations, for the purposes of accommodating common configurations of cell structures, as taught by Applicant.

Ritter in view of Applicant's admitted prior art do not specifically teach of [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (note the brackets were added for clarity in language and it is believed these limitations have been addressed in the above cited references).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein of [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel

transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

8. Claims 2 –6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060).

Regarding claim 2, Applicant's admitted prior art teaches of a 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors (page 2, paragraph 0005);

Applicant's admitted prior art does not specifically teach of a second radio 3x7 base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the second radio base station coupled to a second group of radios per each sector of the three sectors, wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station coupled to the first radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station also providing wireless communication to the three sectors (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to a second group of radios per each sector of the three sectors (Figure 1 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for

the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Regarding claim 3, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies between 806-960 MHz (column 2,lines 53 –60).

Regarding claim 4, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio

base station transmits and receives frequencies between 1710-1855 MHz (column 2,lines 53 – 60).

Regarding claim 5, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies between 2500-2690 MHz (starting column 4, line 66 and ending column 5, line 13).

Regarding claim 6, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further discloses the use of various other transmit and receive frequencies. However, Applicant's admitted prior art, in view of Ritter and Fuji, do not explicitly show using transmits and receives frequencies between 2.4 GHz-2.5 GHz.. The use of ISM band frequencies is a matter of system preference and is very well known in the art, thus the Examiner takes "Official Notice" as such. Therefore it would have been obvious to one skilled in the art, at the time of invention, to combine Applicant's admitted prior art, in view of Ritter and Fuji with the ISM band frequencies in order to accommodate newly available technologies (such as 802.11b or Bluetooth) created for use in the this consumer band.

Regarding claim 11, Applicant's admitted prior art teaches of a 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors (page 2, paragraph 0005);

Applicant's admitted prior art does not specifically teach of a second radio 3x7 base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the second radio base station coupled to a

second group of radios per each sector of the three sectors, wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector or of the first group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz; or of the second group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station coupled to the first radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station also providing wireless communication to the three sectors (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to a second group of radios per each sector of the three sectors (Figure 1 and column 4, lines 48 –65) and or of the first group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65); and of the second group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

9. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) as applied to claim 2 above, and further in view of Ketonen (Ketonen, US Patent No. 6,104,917).

Regarding claims 7 and 8, Applicant's admitted prior art in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Applicant's admitted prior art in view of Ritter and Fujii, do not specifically teach of wherein the first and second 3x7 radio base station comprises a cabinet to protect electronic equipment from environmental exposure.

In a related art dealing with control of environmental conditions for a BTS, Ketonen teaches of wherein the first and second 3x7 radio base stations comprises a cabinet to protect electronic equipment from environmental exposure (column 2,lines 38 –50 and column 3, lines 10 –23).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's admitted prior art in view of Ritter and Fujii's combined BTS structure, Ketonen's cabinent and control methods, for the purposes of operating electrical equipment housed within the cabinet, at an operating within tolerances, as taught by Ketonen.

10. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) as applied to claim 2 above, and further in view of Djumphammer et al. (Djumphammer, US Patent No. 5,394,459).

Regarding claims 9 and 10, Applicant's admitted prior art in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Applicant's admitted prior art in view of Ritter and Fujii, do not specifically teach of wherein the first and second 3x7 radio base stations comprises a prefabricated structure.

In a related art dealing with BTS cabinets, Djumphammer teaches of wherein the first and second 3x7 radio base stations comprises a prefabricated structure (column 1, lines 45 –57 and column 2, lines 44 –64).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's admitted prior art in view of Ritter and Fujii's combined BTS

structure, Djumphammer's cabinet structure, for the purposes of fault detection based on position, as taught by Djumphammer.

11. Claims 12 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) and Eriksson et al. (Ericksson, US Patent No. 5,521,904).

Regarding claim 12, Applicant's admitted prior art teaches of a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station providing wireless communication to three sectors within the wireless communication system; and the first 3x7 radio base station comprising a first group of seven radios per sector (page 2, paragraph 0005),

Applicant's prior art does not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of seven radios per sector, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second

group of radios per sector (Figure 1 and column 4, lines 48 –65) and the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Applicant's prior art in view of Ritter and Fujii do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals.

In related art dealing with BTS testing, Eriksson teaches of the first 3x7 radio base station comprising a first measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a first power splitter unit (Figure 4 and column 4, lines 1 –14), the first measuring coupler unit for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), and the first power splitter unit for distributing received signals (Figure 4 and column 4, lines 1 –14); and the second 3x7 radio base station comprising, a second measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a second power splitter unit (Figure 4 and column 4, lines 1 –14), the second measuring coupler unit also for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), the second power splitter unit also for distributing received signals (Figure 4 and column 4, lines 1 –14).

It would have been obvious to one skilled in the art at the time of invention to have

included into Applicant's prior art, Ritter, and Fujii's combined BTS structure, Eriksson's additional components, for the purposes of a low cost test set that requires no additional processing equipment, as taught by Eriksson.

Regarding claim 13, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first measuring coupler unit is coupled to the second power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 14, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second measuring coupler unit is coupled to the first power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 15, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first measuring coupler unit is coupled to the first power splitter unit and to the second power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 16, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second measuring coupler unit is coupled to the

second power splitter unit and to the first power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 17, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first 3x7 radio base station further comprises a first radio frequency test: loop, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit (seen from Eriksson Figure 2 and column 3, lines 31 – 44, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 18, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second 30 radio base station further comprises a second radio frequency test loop, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit (seen from Eriksson Figure 2 and column 3, lines 31 – 44, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 19, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 – 65).

Regarding claim 20, Applicant's admitted prior art teaches of a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station providing wireless

communication to three sectors within the wireless communication system; and the first 3x7 radio base station comprising a first group of seven radios per sector (page 2, paragraph 0005),

Applicant's prior art does not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of seven radios per sector, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the second 3x7 radio base station; the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second

group of radios per sector (Figure 1 and column 4, lines 48 –65); the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65) and radio base station transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20) or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the second 3x7 radio base station; the first measuring coupler

unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Applicant's prior art in view of Ritter and Fujii do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the

second 3x7 radio base station; the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In related art dealing with BTS testing, Eriksson teaches of the first 3x7 radio base station comprising a first measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a first power splitter unit (Figure 4 and column 4, lines 1 –14), the first measuring coupler unit for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), and the first power splitter unit for distributing received signals (Figure 4 and column 4, lines 1 –14); and the second 3x7 radio base station comprising, a second measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a second power splitter unit (Figure 4 and column 4, lines 1 –14), the second measuring coupler unit also for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), the second power splitter unit also for distributing received signals (Figure 4 and column 4, lines 1 –14); the first radio frequency test loop for calibration and test of the first 3x7 radio base station (Figure 2 and column 8, lines 3 – 11); the second radio frequency test loop for calibration and test of the second 3x7 radio base station (Figure 2 and column 8, lines 3 – 11); the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii); and the second measuring coupler unit

coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art, Ritter, and Fujii's combined BTS structure, Eriksson's additional components, for the purposes of a low cost test set that requires no additional processing equipment, as taught by Eriksson.

Citation of Pertinent Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Inventor	Publication	Number	Disclosure
Herrig	US Patent	6,470,183	Apparatus and method for reducing the effects of intermodulation interference in a cellular radio system
Jeon et al.	US Patent	6,157,629	Base transceiver station of CDMA mobile communication system, has base control processor that periodically checks states of radio frequency card, analog common card and sector interface card
Ward et al.	US Patent	6,104,930	Floating transceiver assignment for cellular radio

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Tanmay S Lele
Examiner
Art Unit 2684

NAY MAUNG
SUPERVISORY PATENT EXAMINER

tsl
November 23, 2003